

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1.-10. (Cancelled)
11. (Currently Amended) A machine load metering and management system comprising:
 - a plurality of sensors associated with one or more machines;
 - a programmable logic controller (PLC) that collects data captured by the plurality of sensors and determines and regulates [[the]] power to be distributed to one or more machines based at least in part upon metered data generated by a waveform analyzer component utilizing the data captured by the plurality of sensors.
12. (Original) The system of claim 11, wherein the waveform analyzer component is a PLC based card.
13. (Original) The system of claim 12, wherein the PLC based card is located in a PLC backplane chassis.
14. (Original) The system of claim 12, wherein the PLC based card contains a processor and a data storage device.
15. (Original) The system of claim 14, wherein the processor time stamps data as it is received and stores the data in a sequence of events table.
16. (Original) The system of claim 11, wherein a PLC processor module determines how power is distributed to one or more machines.

17. (Original) The system of claim 16, wherein the waveform analyzer component is located inside a PLC processor module.
18. (Previously Presented) The system of claim 17, wherein the PLC processor module determines how power is distributed based on an optimization algorithm which has input parameters relating to business concerns, the health of each machine, and the power consumed by each machine.
19. (Original) The system of claim 17, wherein the PLC processor and the waveform analyzer are connected and communicate *via* a backplane.
- 20.-26. (Cancelled)
27. (Previously Presented) A method for monitoring and managing loads comprising:
retrieving load data from one or more sensing devices;
deriving energy data using a microprocessor located on a printed circuit board inserted in a slot on a backplane and the load data received from the sensing devices;
determining a load control strategy based at least in part on the derived energy data; and
controlling loads according to the control strategy.
28. (Original) The method of claim 27, wherein determining a load control strategy further comprises communicating energy data over a network and collaborating with multiple controllers to develop a distributed control strategy for a plurality of loads.
29. (Original) The method of claim 27, wherein load data is restricted to Volts, Amperes and Watts.
30. (Original) The method of claim 27, wherein the energy data comprises at least one of energy consumption, harmonic distortion, and power factor associated with a load.

31. (Original) The method of claim 27, wherein loads are controlled by output devices connected to the backplane.

32. (Original) A computer readable medium having stored thereon computer executable instructions for carrying out the method of claim 27.